CSTE Disparities Project Abstract

Max 400 words

393 words

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Title: CSTE Pilot Project: Area based socioeconomic analysis for 2001 and 2010 Pneumonia hospitalizations in New Mexico

Background: The Harvard Gecoding Data Analytic Method developed by Nancy Krieger et al. is a technique of applying area based socioeconomic measures (ABSM) to case level data. The New Mexico Department of Health (NMDOH) is one of the eleven sites selected by the Council for State and Territorial Epidemiologists Health Disparities Project to implement a pilot project using Harvard’s methods. The NMDOH used the Hospital Inpatient Discharge Data (NM-HIDD) to assess socioeconomic difference in pneumonia hospitalization rates during 2001 and 2010.

Methods: Addresses of patients hospitalized for pneumonia in 2001 and 2010 in NM were assessed for completeness and quality using Semaphore ZP4. Addresses were geocoded to the US Census Tract and were analyzed using techniques defined by Krieger et al. Rates of pneumonia hospitalizations and rates by socioeconomic factors were calculated by census tract.

Results: In 2001, there were 8,365 cases of pneumonia that were hospitalized and able to be geocoded. The race/ethnicity distribution for 2001 is as follows: 50% White; 32% Hispanic; 6.7% American Indian/Alaska Native (AIAN); 3.5% some other race. In 2010, there were 10,254 cases of pneumonia that were hospitalized and able to be geocoded. The race/ethnicity distribution is as follows: 47.7% White; 32.5% Hispanic; 10.6% AIAN; 1.6% some other race. Around 50% of pneumonia hospitalizations had a primary payer of Medicare, while about 20% had a primary payer of private insurance and self-pay in 2001 and 2010.

The age-adjusted rate of 2001 pneumonia hospitalizations in New Mexico was 651.1 per 100,000 hospitalizations and 649.6 per 100,000 hospitalizations in 2010. The relative risk of AIAN as compared to whites for a pneumonia hospitalization was 0.59 (CI: 0.58, 0.59) in 2001 and 0.30 (CI: 0.30, 0.31) in 2010. The relative risk of those more than 20% BPL (below poverty line) as compared to those only 5% BPL was 1.62 (CI: 1.61, 1.63) in 2001 and 1.14 (CI: 1.13, 1.14) in 2010. As the percentage of unemployment decreased, the relative risk of being hospitalized for pneumonia increased in 2001 and 2010.

Conclusions: Those cases who were AIAN, in an area where the population was less than 5% BPL and had an unemployment rate of 9.5% or greater were least likely to be hospitalized for pneumonia in 2001 and 2010.

This pilot project shows the need for more analysis on ABSM, which includes applying these methods to additional years in the NM-HIDD to identify trends.